

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Viraj Chatterjee, et al.	Art Unit	: 2629
Serial No.	: 10/680,930	Examiner	: Kevin M. Nguyen
Filed	: October 7, 2003	Conf. No.	: 7598
Title	: INDEPENDENT VIEWS GENERATED FOR MULTIPLE DISPLAY DEVICES BY A SOFTWARE APPLICATION		

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Commissioner for Patents
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BRIEF ON APPEAL

This Appeal Brief is submitted under 37 CFR 41.37, thereby perfecting the Notice of Appeal filed in the U.S. Patent and Trademark Office on January 29, 2008, and in support of the appeal from the Final Rejection set forth in the Office Action mailed on October 29, 2007.

(1) Real Party in Interest

Adobe Systems Incorporated, the assignee of this patent application, is the real party in interest.

(2) Related Appeals and Interferences

There are no related appeals or interferences.

(3) Status of Claims

Claims 1-49 are pending and rejected. Claims 1, 18, 35, 46 and 48 are the independent claims. The rejection of claims 1-49 is appealed.

(4) Status of Amendments

The claims have not been amended subsequent to final rejection. There are no unentered amendments.

(5) Summary of Claimed Subject Matter

Claim 1

Claim Language	Support in Specification and/or FIGS.
A method comprising:	<i>See, e.g.</i> , page 1, ll. 4-6; page 8, ll. 6-7; page 9, l. 16; FIGS. 4 and 5.
identifying, by a software application in a computing system, display characteristics of multiple display devices; and	<i>See, e.g.</i> , page 5, ll. 19-29; page 7, ll. 19-23; page 9, ll. 16-23; page 10, ll. 4-9; FIG. 5, Nos. 500 and 520.
generating, by the software application in the computing system, simultaneous independent views of an electronic document on the display devices by separately rendering the electronic document to each of the display devices based on the identified display characteristics of the device.	<i>See, e.g.</i> , page 5, l. 29 – page 6, l. 6; page. 6, ll. 20-21; page 7, l. 29 – page 8, l. 5; page 8, l. 29 – page 9, l. 5; page 10, ll. 4-5; FIG. 1, Nos. 110, 160, 150 and 170; FIG. 4, No. 410; FIG. 5, No. 540.

Claim 2

Claim Language	Support in Specification and/or FIGS.
The method of claim 1, wherein generating the independent views comprises separately rendering the electronic document according to presentation tags associated with content in the electronic document, the presentation tags indicating device-dependent rendering to be applied to the content based upon assigned device types of the display devices.	<i>See, e.g.</i> , page 8, ll. 14-26; page 9, ll. 20-27; FIG. 5, No. 530.

Claim 3

Claim Language	Support in Specification and/or FIGS.
The method of claim 2, wherein identifying the display characteristics comprises periodically re-identifying the display characteristics of the display devices, in conjunction with multiple iterations of the separate renderings of the electronic document to allow display devices to be added and removed dynamically.	<i>See, e.g.</i> , page 10, ll. 7-15; FIG. 5, No. 500.

Claim 12

Claim Language	Support in Specification and/or FIGS.
The method of claim 5, wherein generating the independent views of the electronic document comprises generating a user interface with the first view that provides control over the independent views on the display devices both together and separately.	<i>See, e.g.</i> , page 10, ll. 18-22; FIG. 3, No. 310; FIG. 4, No. 400.

Claim 18

Claim Language	Support in Specification and/or FIGS.
A software product tangibly embodied in a machine-readable medium, the software product comprising instructions operable to cause a data processing apparatus to perform operations from an application	<i>See, e.g.</i> , page 10, ll. 26-29, FIG. 3, No. 300.

layer of the data processing apparatus, the operations comprising:	
identifying display characteristics of multiple display devices; and	<i>See, e.g.,</i> page 5, ll. 19-29; page 7, ll. 19-23; page 9, ll. 16-23; page 10, ll. 4-9; FIG. 5, Nos. 500 and 520.
generating, by the software application in the computing system, simultaneous independent views of an electronic document on the display devices by separately rendering the electronic document to each of the display devices based on the identified display characteristics of the device.	<i>See, e.g.,</i> page 5, l. 29 – page 6, l. 6; page 6, ll. 20-21; page 7, l. 29 – page 8, l. 5; page 8, l. 29 – page 9, l. 5; FIG. 1, Nos. 110, 160, 150 and 170; FIG. 4, No. 410; FIG. 5, No. 540.

Claim 35

Claim Language	Support in Specification and/or FIGS.
A system comprising:	<i>See, e.g.,</i> page 5, ll. 9-10; FIG. 1, Nos. 100 and 150.
one or more peripheral display devices; and	<i>See, e.g.,</i> page 5, ll. 20-26; page 6, ll. 14-15; page 7, ll. 5-8; page 8, ll. 8-10; FIG. 1, No. 150; FIG. 3, No. 330.
a data processing system comprising a primary display device and a software application that generates simultaneous independent views of an electronic document on the display devices based on display characteristics of the display device as identified by the software application.	<i>See, e.g.,</i> page 5, ll. 9-18; page 5, l. 29 – page 6, l. 6; page 6, ll. 20-21; page 7, l. 29 – page 8, l. 5; page 8, l. 29 – page 9, l. 5; page 10, ll. 4-5; FIG. 1, Nos. 100 and 110; FIG. 3, Nos. 300 and 330; FIG. 5, No. 540.

Claim 37

Claim Language	Support in Specification and/or FIGS.
The system of claim 35, wherein the software application identifies the display devices that are currently interfaced with the data processing system by periodically polling display interface hardware.	<i>See, e.g.</i> , page 10, ll. 7-15; FIG. 5, No. 500.

Claim 46

Claim Language	Support in Specification and/or FIGS.
A system comprising:	<i>See, e.g.</i> , page 5, ll. 9-10; FIG. 1, Nos. 100 and 150.
one or more peripheral display devices; and	<i>See, e.g.</i> , page 5, ll. 20-26; page 6, ll. 14-15; page 7, ll. 5-8; page 8, ll. 8-10; FIG. 1, No. 150; FIG. 3, No. 330.
a data processing system comprising a primary display device and a software application that generates simultaneous independent views of an electronic document on the display devices based on display characteristics of the display device as identified by the software application, wherein a primary view from the independent views includes rendered content not included in a secondary view from the independent views, and the primary view includes at least a portion of	<i>See, e.g.</i> , page 5, ll. 9-18; page 5, l. 29 – page 6, l. 6; page 6, ll. 11-13; page 6, l. 24 – page 7, l. 3; page 7, ll. 5-7; page 7, l. 29 – page 8, l. 5; page 8, l. 29 – page 9, l. 5; page 10, ll. 4-5; FIG. 1, Nos. 100 and 110; FIG. 3, Nos. 300 and 330; FIG. 5, No. 540.

a user interface that provides control over the independent views on the display devices both together and separately, and the secondary view forms part of a presentation.	
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Claim 48

Claim Language	Support in Specification and/or FIGS.
A system comprising:	<i>See, e.g.</i> , page 5, ll. 9-10; FIG. 1, Nos. 100 and 150.
software-application-means for accessing an electronic document; and	<i>See, e.g.</i> , page 5, ll. 4-8; page 7, ll. 16-19; page 11, ll. 13-20; FIG. 1, Nos. 100 and 140.
software-application-means for outputting multiple, simultaneous, independent views of the electronic document to different display hardware devices having different screen resolutions and color depths.	<i>See, e.g.</i> , page 5, ll. 9-18; page 5, l. 29 – page 6, l. 6; page 6, ll. 11-13; page 6, l. 24 – page 7, l. 3; page 7, ll. 5-7; page 7, l. 29 – page 8, l. 5; page 8, l. 29 – page 9, l. 5; page 10, ll. 4-5; FIG. 1, Nos. 140, 160 and 170; FIG. 3, Nos. 300 and 330; FIG. 5, Nos. 500-540.

Claim 49

Claim Language	Support in Specification and/or FIGS.
The system of claim 48, further comprising: software-application-means for controlling the outputting software-application-means based on user configuration.	<i>See, e.g.</i> , page 7, ll. 5-8; page 8, ll. 7-10; page 8, ll. 17-20; page 8, ll. 26-29; FIG. 4, No. 400; FIG. 5, Nos. 530 and 540.

(6) Grounds of Rejection to be Reviewed on Appeal

(a) Claims 1, 18, 35-39, 48 and 49 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Singhal et al. (U.S. Pat. No. 5,488,385, hereinafter “Singhal”).

(b) Claims 2-8, 11, 19-25, 28, 41 and 42 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Singhal in view of Terayama et al. (U.S. Pat. No. 7,010,551, hereinafter “Terayama”).

(c) Claims 46 and 47 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Singhal in view of Okuley et al. (U.S. Pat. No. 6,956, 542, hereinafter “Okuley”).

(d) Claims 9, 10, 12-15, 26, 27, 29, 31, 32 and 40 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Singhal in view of Shih (U.S. Pat. No. 7,102,591, hereinafter “Shih”).

(e) Claim 43 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Singhal in view of Terayama, and further in view of Tafoya (U.S. Pat. No. 5,917,480, hereinafter “Tafoya”).

(f) Claims 44 and 45 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Singhal in view of Terayama, further in view of Tafoya, and still further in view of Meyn (U.S. Pat. No. 5,859,623, hereinafter “Meyn”).

(g) Claim 13, 16, 17, 30, 33 and 34 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Singhal in view of Shih, and further in view of Meyn.

(7) Argument

(a) Claim rejections under 35 U.S.C. §102(b)

(i) Independent claim 1

Claim 1 was rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Singhal.

The Federal Circuit has long held a very high standard for anticipation. A “claim is anticipated only if each and every element as set forth in the claim is found . . . in a single prior art reference.” MPEP § 2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987)) (emphasis added). In addition, the “identical invention must be shown in as complete detail as is contained in the... claim.” *Id.* (citing *Richardson v. Suzuki*

Motor Co., 868 F.2d 1226, 1236 (Fed. Cir. 1989)) (emphasis added). Singhal does not disclose each and every element as set forth in independent claim 1, and therefore clearly not in as complete detail as claim 1. The Examiner has not adequately addressed the arguments made by the Applicants with respect to claim 1.

In essence, the Examiner seems to implicitly argue in rejecting independent claim 1 that because the Applicants' claimed subject matter and Singhal accomplish a similar, though not identical, end, the Applicants' means, regardless of differences, are thereby anticipated. See 10-29-2007 Office Action at page 13. This argument fails because it confuses ends and means. In the U.S. patent system, means are as important as the ends. See, e.g., MPEP § 2116.01 ("a process yielding a novel and nonobvious product may nonetheless be obvious; conversely, a process yielding a well-known product may yet be nonobvious") (citing *TorPharm v. Ranbaxy Pharma.*, 336 F.3d 1322 (Fed. Cir. 2003)). Although both relate to a computer system having multiple displays, the similarity does not justify ignoring the clear differences between the Applicants' claimed subject matter and the subject matter described in Singhal.

Independent claim 1 recites a method including "identifying" and "generating" operations performed in a specified manner. Singhal does not anticipate claim 1 because Singhal does not teach these operations in as complete detail as claim 1, as required by the Federal Circuit.

(A) The identifying operation of independent claim 1

Claim 1 recites, "identifying, by a software application in a computing system, display characteristics of multiple display devices." Singhal does not disclose identifying display characteristics at all. The Examiner asserts that, "Singhal teaches the use of CPU 12 to instruct or identify displaying [sic] the LCD and CRT." See 10-29-2007 Office Action at page 13. The portion of Singhal the Examiner cites to support his assertion generically teaches display characteristics but not the identifying of display characteristics. Singhal discloses "the display devices are VESA standard resolution devices including a 640 by 480 pixel resolution STN LCD panel 52 and a conventional high-resolution CRT display 54," col. 5, lines 48-51 (emphasis added). The Examiner's reference to Singhal's disclosure of display devices with

display characteristics is entirely irrelevant to the question of whether Singhal discloses the operation of **identifying** those display characteristics.

The Examiner's argument that the CPU taught by Singhal identifies display characteristics is not only without support in the cited portion but throughout Singhal's disclosure. Singhal's description includes nine references to the CPU, none of which discloses the CPU identifying display characteristics ("a processor 12 [CPU] and system memory 14 are coupled" col. 4, lines 11-13, "characteristics to be set by the processor 12," col. 4, line 21, "application programs executing on the processor 12," col. 5, line 6, "programmed by the CPU 12 to control the operation of the video controller 50," col. 5, lines 51-52, "control software executed by the processor 12," col. 5, lines 56-57, "unique set of I/O addresses to the processor 12," col. 5, lines 60-61, "between the processor 12 and the video memory 36," col. 6, lines 20-23, "memory spaces relative to the processor 12," col. 6, lines 52-53, "the transfer of frame data between the processor 12 and image video memory 58," col. 7, lines 40-42). The Examiner's assertion regarding **identifying** by a CPU, therefore, **cannot** be supported by Singhal.

One of ordinary skilled in the art will recognize why Singhal does not teach **identifying** display characteristics. Video controllers, to which Singhal is mainly directed, generally **define** the display characteristics of a display device. A video controller, such as disclosed by Singhal, is likely to be the **source** from which a software application embodying the Applicants' claimed subject matter **identifies** display characteristics. Singhal's teachings support the view that its disclosed video controller is a **source** rather than a **consumer** (i.e., **identifier**) of information about the display characteristics: "allowing multiple video display timing characteristics to be **set** by the processor 12," col. 4, lines 20-21 (in prior art description), "the enhanced VGA controller 34 implements separate registers related to **establishing** the resolution of the display devices," col. 5, lines 32-35 (emphasis added), and "optimum use can be made... dependent on the **desired** resolution and color depth for the display devices," col. 6, lines 2-5.

Even assuming, for sake of argument, that Singhal taught the identifying of display characteristics by a CPU (which is not conceded), a CPU is not equivalent to a **software application**. The Examiner argues that "Singhal teaches the use of CPU 12 to instruct or identify displaying [sic] the LCD and CRT. It is realized by using hardware, CPU 12, and by using the software application on the computer is logically equivalent. Moreover, those skilled in

the computer art would recognize that such an implementation can be expressed in terms of either computer program (software application) or a CPU 12 (hardware) implementation, the two being functionally equivalent of one another." See 10-29-2007 Office Action at page 13. Claim 1 requires identifying display characteristics by a software application. *Ab initio*, the Examiner's argument is inconsistent with the Federal Circuit's clear indication that "[a] claim is anticipated only if each and every element as set forth in the claim is found . . . in a single prior art reference." MPEP § 2131 (citing *Verdegaal Bros.*, 814 F.2d at 631) (emphasis added). The MPEP does not refer to finding equivalents of elements as part of the 102 anticipation analysis. Instead, the MPEP specifies that "the words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification," § 2111.01(I), and that "the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question," § 2111.01(III) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (*en banc*)). A person of ordinary skill in the art would not recognize the plain meaning of a software application performing a specific operation to include a general-purpose, hardware CPU that does not perform the operation.

The Examiner makes an unsupported logical jump in the Advisory Action, taking the Applicants' statement regarding Singhal's disclosure of using "software" to emulate dual VGA controllers to mean that "Singhal teaches a software to identify the characteristics of multiple display devices." See 01-17-2008 Advisory Action at page 2 (emphasis added). This erroneous and unsupported assertion is not conceded. The Applicants may have slightly misstated the case in the Response filed 12-31-2007 by using the term "software" in its very broadest sense, which might be considered to include firmware or embedded code. However, the points addressed in this paragraph of the Response filed 12-31-2007 remain the same: (1) that Singhal itself teaches that hardware and computer program code are not equivalent, and (2) that "a computer program" is not equivalent to a "software application" in light of the use of this terminology in the present patent application.

Moreover, nothing in the previously presented arguments suggests that Singhal teaches identifying, by a software application in a computing system, display characteristics of multiple display devices. Singhal teaches a single hardware VGA controller emulating dual hardware VGA controllers: "The function of the enhanced VGA controller 34 is to effectively

emulate, essentially in a single integrated circuit, two complete VGA controllers, each functionally comparable to the VGA 22, but with some limiting interdependencies related to the access rate and capacity of the shared video memory 36 and the number and nature of any configuration registers that are functionally shared,” col 5, lines 24-27. Nothing here suggests that a software application is identifying display characteristics of multiple display devices, and the Examiner’s mental jump from emulation to identifying display characteristics is unwarranted and unsupported since emulation, even if by “software”, does not necessarily include **identifying** display characteristics.

With respect to the presently claimed subject matter, one of ordinary skill in the art would recognize that the use of a software application is **not equivalent** to the use of hardware. In claim 1, it is the software application that performs the claimed identifying. The present disclosure describes advantages, which would **not** result if hardware performed the operations of claim 1, which further demonstrates the lack of equivalence: “A professional high-fidelity display presentation can be given from any low-end device, such as a personal digital assistant, and there is no need to know beforehand what kind of display device might be encountered when it comes time to make the presentation The data and/or the document format need not be specifically prepared for rendering to a particular target output device, and a presentation can be made to any target output device without specialized presentation hardware.” See Specification at ¶s 10-11. As is readily understood by those in the field, a software application (or updates thereto) that performs operations can be downloaded over a network to a presenter when needed but hardware cannot, of course, be transmitted over a network. Thus, hardware is **not equivalent** to software in the present context.

Singhal itself teaches that software applications and hardware are not equivalent. Singhal teaches that one advantage of the enhanced VGA adapter is “full compatibility with conventional software,” col. 3, lines 11-15, which those skilled in the art will recognize as a continual concern of hardware manufacturers. Singhal further teaches how hardware carries out the purposes of the invention. “[T]he frame data for the separate display devices 52, 54 is stored in an interleaved or alternating series of data storage locations The video memory 36 is preferably constructed utilizing RAM integrated circuits supporting a page or burst mode of operation allowing a high rate of access to a short series of consecutive storage locations within the video memory 36,” col.

6, lines 37-44. Singhal never discloses that a software application could carry out these functions or provide the advantages it teaches. Singhal, instead, clearly distinguishes between hardware and software. In addition, as those skilled in the field will recognize as common in hardware disclosures, Singhal's few references to software are only cursory. See, Singhal, col. 3, lines 11-13, col. 5, lines 5-8, and col. 5, lines 55-60.

Thus, Singhal itself makes clear that hardware is **not equivalent** to software, and Singhal does not describe, "identifying, by a software application in a computing system, display characteristics of multiple display devices", as recited in claim 1.

(B) The generating operation of independent claim 1

Claim 1 recites "generating, by the software application in the computing system, simultaneous independent views of an electronic document on the display devices by separately rendering the electronic document to each of the display devices based on the identified display characteristics of the device." Singhal does not disclose each of every element of the generating element as set forth in as complete detail as claim 1.

Singhal teaches displaying independent images, col. 6, lines 36-37, while the Applicants claim a method of generating independent views of an electronic document. Use of the same word "independent" in Singhal and claim 1 cannot justify ignoring essential differences in the contexts in which the word is used. What is displayed, the subject, namely an electronic document, is an important aspect of claim 1 and is central to the Applicants' specification. In contrast, the teachings in Singhal relate to how the hardware should function to accommodate either different or identical display on independent display devices: "To support the display of independent display images, the multiplexer provides alternating 32 bit words of the frame data . . . Where identical frame data is to be provided to both the LCD controller 118 and CRT interface 124, the video sequencer 116 preferably functions to replicate the frame data," col. 8, lines 4-14. Put differently, claim 1 recites independent views of a particular document while Singhal teaches merely independent images.

Furthermore, Singhal **does not** disclose an electronic document. The Examiner apparently argues that an electronic document is inherent in Singhal's teachings: "Singhal teaches a notebook computer, col. 4, line 59, which is used to store any files in the memory,

which implies an electronic document.” 10-29-2007 Office Action at page 13. According to the Federal Circuit, “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities.’ ” MPEP § 2112(IV) (citing *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (emphasis added) (citations omitted)). Whether or not a file is inherent is questionable since a notebook computer could have a video controller, as disclosed by Singhal, but have no disk drive or hard drive and therefore no files. Moreover, a file is not the same as an electronic document. Specification at ¶19 (“As used herein, the terms ‘electronic document’ and ‘document’ mean a set of electronic data, including both electronic data stored in a file and electronic data received over a network. An electronic document does not necessarily correspond to a file.”).

However, the more important question is not whether Singhal inherently discloses a file but rather whether the Singhal device inherently discloses “generating, by the software application..., simultaneous independent views of an electronic document,” as recited in claim 1. “Under the principles of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device.” MPEP § 2112.02 (emphasis added). Singhal teaches that its disclosed device does not necessarily perform this claimed method because Singhal teaches a device that can produce independent images, without limitation, col. 6, lines 36-37 (“In the preferred embodiments of the present invention, where independent images are to be simultaneously displayed, the frame data for the separate display devices 52, 54 is stored in an interleaved or alternating series of data storage locations.”). The images, therefore, need not be “independent views of an electronic document.”

Even assuming, for the sake of argument, that Singhal does inherently disclose an electronic document (which is not conceded), the rest of the disclosure in Singhal makes very clear that such an electronic document would be rendered to frame data, and the frame data is separately transferred to the CRT driver and the LCD controller, col. 5, line 40 - col. 7, line 25. Thus, nothing in Singhal teaches or suggests, “generating... simultaneous independent views of an electronic document on the display devices by separately rendering the electronic

document to each of the display devices **based on the identified display characteristics** of the devices,” as required by claim 1.

Moreover, nothing in Singhal describes separately **rendering** an electronic document to generate simultaneous independent views of an electronic document. “Rendering” is a term of art in the software application field, which is commonly understood by those of ordinary skill to mean, in general, the conversion of a high-level object-based description into a graphical image for display. The Examiner asserts that, “The term ‘render’ is to convert graphics from a file into visual form,” and also that, “Singhal discloses the frame data for the separate display devices 52 and 54, col. 6, lines 36-37, and lines 56-60.” 10-29-2007 Office Action at page 13. It is respectfully pointed out the “frame data” in Singhal is not “a file.” See, e.g., col. 6, lines 36-41 and 50-60. Singhal says nothing about how to convert a file into the frame data that is stored in the frame buffer 58. Thus, under the Examiner’s own interpretation of the term “render,” Singhal does not describe separately rendering an electronic document to multiple display devices.

Therefore, Singhal does not disclose the identifying and generating operations “**as set forth**” in claim 1, as required by the Federal Circuit. Thus, the rejection of independent claim 1 over Singhal should be overturned.

(ii) **Claims 18, 35 and 48 & claims 36, 38 and 39**

Independent claims 18, 35 and 48 include features similar to independent claim 1. Thus, for at least the above reasons, the rejection of independent claims 18, 35 and 48 over Singhal should be overturned. Likewise, claims 36, 38 and 39 depend from claim 35, and thus the rejection of dependent claims 36, 38 and 39 over Singhal should also be overturned for at least the above reasons.

(iii) **Dependent claim 37**

The rejection of dependent claim 37 over Singhal should be overturned for at least the same reasons as its base claim. In addition, dependent claim 37 recites, “wherein the software application identifies the display devices that are currently interfaced with the data processing system by **periodically polling** display interface hardware,” (emphasis added). The Examiner

has failed to address this claimed subject matter, disregarding the claim language when making the rejection. 05-07-2007 Office Action at page 4. The Final Office Action cites to col. 6, lines 6-19, as allegedly disclosing this limitation. However, nothing in the cited portion of Singhal, or any other portion of Singhal, describes **periodically polling** display interface hardware. The Examiner has failed to address this point in the Advisory Action. Thus, the rejection of dependent claim 37 over Singhal should be overturned for at least this additional reason.

(iv) Dependent claim 49

The rejection of dependent claim 49 over Singhal should be overturned for at least the same reasons as its base claim. In addition, dependent claim 49 recites, “software-application means for controlling the outputting software-application means based on **user** configuration,” (emphasis added). The Examiner has cited to col. 5, lines 51-60, and also col. 6, lines 2-5, of Singhal as allegedly disclosing this claimed subject matter. 10-29-2007 Office Action at page 14. However, these cited portions of Singhal say nothing at all about enabling **a user** to control how the video control unit or the control software of Singhal operate. The Examiner has failed to address this point. Thus, the rejection of dependent claim 49 over Singhal should be overturned for at least this additional reason.

For all of the above reasons, it is respectfully requested that ground of rejection (a) be overturned.

(b) Claims rejected under 103(a) over Singhal in view of Teryama

(i) Dependent claims 2-8, 11, 19-25, 28, 41 and 42

Terayama fails to cure the deficiencies of Singhal. Thus, the rejection of dependent claims 2-8, 11, 19-25, 28, 41 and 42 over Singhal and Terayama should be overturned based on at least the arguments presented above for their respective base claims.

(ii) Dependent claims 2-4

In addition, claim 2 recites, “**rendering**... according to presentation tags... **indicating device-dependent rendering** to be applied.” Nothing in Terayama suggests that the tags indicate device-dependent rendering since the tags in Terayama are not designed to specify

which content is to be rendered to which display device. Rather, the method in Terayama checks the tags to see if the indicated data is displayable on a limited-capability device. In other words, the information linking the data to a specific type of display device is in the software performing the method only, not the tags themselves. Thus, Terayama does not teach or suggest the subject matter of claim 2 or its dependent claims 3 and 4. The Examiner has failed to address this point. Thus, the rejection of dependent claims 2-4 over Singhal and Terayama should be overturned for at least this additional reason.

(iii) **Dependent claim 3**

In addition, claim 3 recites, “wherein identifying the display characteristics comprises **periodically re-identifying the display characteristics** of the display devices, in conjunction with multiple iterations of the separate renderings of the electronic document to allow display devices to be added and removed dynamically.” The cited portion of Singhal (col. 13, lines 50-51) simply states, “6. A display subsystem providing for the simultaneous redisplay of independent images to multiple independent display devices[.]” This does **not** describe “periodically re-identifying the display characteristics of the display devices... to allow display devices to be added and removed dynamically.” The Examiner has failed to address this point. Thus, the rejection of dependent claim 3 over Singhal and Terayama should be overturned for at least this additional reason.

For all of the above reasons, it is respectfully requested that ground of rejection (b) be overturned.

(c) **Claims rejected under 35 U.S.C. 103(a) over Singhal in view of Okuley**

Claims 46 and 47 stand rejected as allegedly being unpatentable under 35 U.S.C. § 103(a) over Singhal in view of Okuley. Claim 46 includes features similar to those in claim 1, and claim 47 depends from claim 46. Okuley fails to cure the deficiencies of Singhal noted above in connection with claim 1. Thus, the rejection of claims 46 and 47 over Singhal and Okuley should be overturned for at least similar reasons.

In addition, the cited portions of Singhal and Okuley fail to describe “a primary view

from the independent views includes rendered content not included in a secondary view from the independent views, and the primary view includes at least **a portion of a user interface that provides control over the independent views on the display devices both together and separately**, and the secondary view forms part of a presentation,” as recited by independent claim 46 (emphasis added). This point has not been addressed by the Examiner in the Advisory Action. Thus, the rejection of claims 46 and 47 over Singhal and Okuley should be overturned for at least this additional reason.

Accordingly, it is respectfully requested that ground of rejection (c) be overturned.

(d) **Claims rejected under 35 U.S.C. 103(a) over Singhal in view of Shih**
(i) **Dependent claims 9, 10, 12-15, 26, 27, 29, 31, 32 and 40**

Claims 9, 10, 12-15, 26, 27, 29, 31, 32 and 40 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Singhal in view of Shih. Shih fails to cure the deficiencies of Singhal. Thus, the rejection of dependent claims 9, 10, 12-15, 26, 27, 29, 31, 32 and 40 over Singhal and Shih should be overturned based on at least the arguments presented above for their respective base claims.

(ii) **Dependent claims 12-15, 29, 31 and 32**

In addition, claim 12 recites, “wherein generating the independent views of the electronic document comprises generating a user interface with the first view that provides **control over the independent views** on the display devices **both together and separately**,” (emphasis added). The Examiner contends that the claimed user interface is inherent in Singhal’s reference to “notebook computers,” col. 4, line 59. 10-29-2007 Office Action at page 9. The Examiner’s assertion of inherency was (and is) specifically traversed and is not conceded.

To establish an inherent feature not expressly disclosed, it must be clear “that the missing descriptive matter is **necessarily present** in the thing described.” See MPEP § 2131.01 (citing *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991)) (emphasis added). While notebook computers often have user interfaces, notebook computers do not **necessarily** generate “a user interface with the first view that provides **control over the**

independent views [of an electronic document] on the display devices **both together and separately**,” (emphasis added) as required by claim 12. As described, for example, in the present disclosure:

The user interface can be generated to provide control over the independent views. A presenter can use a single user interface on one machine to control the views on both that machine and a second machine displaying a presentation to an audience. For example, the presenter can use the user interface to make notes in the electronic document during the presentation, where those notes do not appear in the view of the document that the audience sees, and the presenter can use the user interface to adjust the zoom level on the audience view without affecting a zoom level on the machine presenting the user interface. Thus, the user interface can apply different functionality differentially among the display devices, including potentially exposing different kinds of functionality for the different display devices.

Specification at ¶ 28. Nothing in Singhal expressly or inherently teaches this subject matter, as claimed. Moreover, in response to the previous traversal of the inherency assertion, the Examiner merely restates the same general comment about a notebook computer. 10-29-2007 Office Action at page 14. The actual claim language, “generating a user interface **with the first view** that provides control over the independent views on the display devices **both together and separately**” (emphasis added), has not been addressed by the Examiner. Claims 13-15 depend from claim 12, claim 29 includes similar language as claim 12, and claims 31 and 32 depend from claim 29. Thus, the rejection of claims 12-15, 29, 31 and 32 over Singhal and Shih should be overturned for at least this additional.

Accordingly, it is respectfully requested that ground of rejection (d) be overturned.

(e) **Claims rejected under 35 U.S.C. 103(a) over Singhal in view of Terayama and Tafoya**

Claim 43 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Singhal in view of Terayama, and further in view of Tafoya. Terayama and Tafoya do not cure

the deficiencies of Singhal with respect to claim 35, from which claim 43 depends. Accordingly, it is respectfully requested that ground of rejection (e) be overturned.

(f) Claims rejected under 35 U.S.C. 103(a) over Singhal in view of Terayama, Tafoya and Meyn

Claims 44 and 45 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Singhal in view of Terayama, further in view of Tafoya, and still further in view of Meyn. Terayama, Tafoya and Meyn do not cure the deficiencies of Singhal with respect to claim 43, from which claims 44 and 45 depend. Accordingly, it is respectfully requested that ground of rejection (f) be overturned.

(g) Claims rejected under 35 U.S.C. 103(a) over Singhal in view of Shih and Meyn

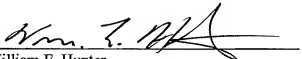
Claim 13, 16, 17, 30, 33 and 34 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Singhal in view of Shih, and further in view of Meyn. Shih and Meyn do not cure the deficiencies of Singhal with respect to claims 1 or 12, from which claims 13, 16 and 17 depend, or with respect to claims 18 and 29, from which claims 30, 33 and 34 depend. Accordingly, it is respectfully requested that ground of rejection (g) be overturned.

Please apply the appeal brief fee, the one month extension of time fee, and any other necessary charges or credits, to Deposit Account No. 06-1050.

Respectfully submitted,

Date: _____

June 12, 2008



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Appendix of Claims

1. A method comprising:
identifying, by a software application in a computing system, display characteristics of multiple display devices; and
generating, by the software application in the computing system, simultaneous independent views of an electronic document on the display devices by separately rendering the electronic document to each of the display devices based on the identified display characteristics of the device.
2. The method of claim 1, wherein generating the independent views comprises separately rendering the electronic document according to presentation tags associated with content in the electronic document, the presentation tags indicating device-dependent rendering to be applied to the content based upon assigned device types of the display devices.
3. The method of claim 2, wherein identifying the display characteristics comprises periodically re-identifying the display characteristics of the display devices, in conjunction with multiple iterations of the separate renderings of the electronic document to allow display devices to be added and removed dynamically.
4. The method of claim 2, further comprising managing the presentation tags associated with the content based on user input.
5. The method of claim 1, wherein a first of the independent views includes rendered content from the document not included in a second of the independent views.
6. The method of claim 5, wherein the content comprises annotations of the document.
7. The method of claim 5, wherein identifying the display characteristics comprises periodically obtaining display characteristics of the display devices.

8. The method of claim 7, wherein obtaining the display characteristics comprises obtaining screen resolution and color depth information of the multiple display devices.

9. The method of claim 5, wherein the computing system comprises a primary display device from the multiple display devices, the first view being provided to the primary display device, the second view being provided to a secondary display device from the multiple display devices, and the primary display device having less display capability than the secondary display device.

10. The method of claim 9, wherein the primary display device comprises a monochrome display device that presents the first view without color, and the secondary display device comprises a full-color display device that presents the second view with full color.

11. The method of claim 5, wherein the rendered content comprises a first page of the document, the first page presented in the first view being different than a second page of the document presented in the second view.

12. The method of claim 5, wherein generating the independent views of the electronic document comprises generating a user interface with the first view that provides control over the independent views on the display devices both together and separately.

13. The method of claim 12, further comprising:
receiving input adding new content to a page of the document during a presentation; and
rendering the new content to the first view but not to the second view.

14. The method of claim 12, wherein the display devices comprise three or more display devices.

15. The method of claim 12, wherein the second view includes additional rendered content not included in the first view.

16. The method of claim 12, wherein the electronic document comprises an electronic document in a predetermined final format that defines an appearance of the electronic document.

17. The method of claim 16, wherein the predetermined final format comprises PDF.

18. A software product tangibly embodied in a machine-readable medium, the software product comprising instructions operable to cause a data processing apparatus to perform operations from an application layer of the data processing apparatus, the operations comprising:

identifying display characteristics of multiple display devices; and
generating simultaneous independent views of an electronic document on the display devices by separately rendering the electronic document to each of the display devices based on the identified display characteristics of the device.

19. The software product of claim 18, wherein generating the independent views comprises separately rendering the electronic document according to presentation tags associated with content in the electronic document, the presentation tags indicating device-dependent rendering to be applied to the content based upon assigned device types of the display devices.

20. The software product of claim 19, wherein identifying the display characteristics comprises periodically re-identifying the display characteristics of the display devices, in conjunction with multiple iterations of the separate renderings of the electronic document to allow display devices to be added and removed dynamically.

21. The software product of claim 19, wherein the operations further comprise managing the presentation tags associated with the content based on user input.

22. The software product of claim 18, wherein a first of the independent views includes rendered content from the document not included in a second of the independent views.

23. The software product of claim 22, wherein the content comprises annotations of the document.

24. The software product of claim 22, wherein identifying the display characteristics comprises periodically obtaining display characteristics of the display devices.

25. The software product of claim 24, wherein obtaining the display characteristics comprises obtaining screen resolution and color depth information of the multiple display devices.

26. The software product of claim 22, wherein the computing system comprises a primary display device from the multiple display devices, the first view being provided to the primary display device, the second view being provided to a secondary display device from the multiple display devices, and the primary display device having less display capability than the secondary display device.

27. The software product of claim 26, wherein the primary display device comprises a monochrome display device that presents the first view without color, and the secondary display device comprises a full-color display device that presents the second view with full color.

28. The software product of claim 22, wherein the rendered content comprises a first page of the document, the first page presented in the first view being different than a second page of the document presented in the second view.

29. The software product of claim 22, wherein generating the independent views of the electronic document comprises generating a user interface with the first view that provides control over the independent views on the display devices both together and separately.

30. The software product of claim 29, wherein the operations further comprise:
receiving input adding new content to a page of the document during a presentation; and
rendering the new content to the first view but not to the second view.

31. The software product of claim 29, wherein the display devices comprise three or
more display devices.

32. The software product of claim 29, wherein the second view includes additional
rendered content not included in the first view.

33. The software product of claim 29, wherein the electronic document comprises an
electronic document in a predetermined final format that defines an appearance of the electronic
document.

34. The software product of claim 33, wherein the predetermined final format
comprises PDF.

35. A system comprising:
one or more peripheral display devices; and
a data processing system comprising a primary display device and a software application that
generates simultaneous independent views of an electronic document on the display devices
based on display characteristics of the display device as identified by the software application.

36. The system of claim 35, further comprising display buffers associated with the
display devices, wherein the software application comprises a display engine that concurrently
renders the electronic document multiple times, each rendering being done in a different display
context to one of the display buffers.

37. The system of claim 35, wherein the software application identifies the display devices that are currently interfaced with the data processing system by periodically polling display interface hardware.

38. The system of claim 37, wherein the display characteristics comprise screen resolution and color depth information.

39. The system of claim 38, wherein the primary display device has less display capability than the one or more peripheral display devices.

40. The system of claim 39, wherein the primary display device comprises a monochrome display device, and the one or more peripheral display devices comprise one or more full-color display devices.

41. The system of claim 35, wherein the software application concurrently renders the electronic document multiple times according to presentation tags associated with content in the electronic document, the presentation tags indicating device-dependent rendering to be applied to the electronic document.

42. The system of claim 41, wherein a primary view from the independent views includes rendered content not included in a secondary view from the independent views.

43. The system of claim 42, wherein the primary view includes at least a portion of a user interface that provides control over the independent views on the display devices both together and separately, and the secondary view forms part of a slide show presentation.

44. The system of claim 43, wherein the electronic document comprises an electronic document in a predetermined final format that defines an appearance of the electronic document.

45. The system of claim 44, wherein the predetermined final format comprises PDF.

46. A system comprising:

one or more peripheral display devices; and

a data processing system comprising a primary display device and a software application that generates simultaneous independent views of an electronic document on the display devices based on display characteristics of the display device as identified by the software application, wherein a primary view from the independent views includes rendered content not included in a secondary view from the independent views, and the primary view includes at least a portion of a user interface that provides control over the independent views on the display devices both together and separately, and the secondary view forms part of a presentation.

47. The system of claim 46, further comprising display buffers associated with the display devices, wherein the software application comprises a display engine that concurrently renders the electronic document multiple times, each rendering being done in a different display context to one of the display buffers.

48. A system comprising:

software-application-means for accessing an electronic document; and

software-application-means for outputting multiple, simultaneous, independent views of the electronic document to different display hardware devices having different screen resolutions and color depths.

49. The system of claim 48, further comprising:

software-application-means for controlling the outputting software-application-means based on user configuration.

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Evidence Appendix

None.

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Related Proceedings Appendix

None.